CLAIMS

1. Apparatus for providing an output of (i) electromagnetic waves, (ii) sound waves or (iii) both electromagnetic and sound waves, comprising:-

a power supply, or means for connection to a power supply;

support structure;

control means; and

a plurality of transmitters arranged in a linear array on said support structure and in electrical contact with said control means;

wherein each transmitter is controllable individually and independently from other transmitters.

2. Apparatus according to Claim 1, comprising means for varying the intensity of output from the transmitters.

3. Apparatus according to Claim 1 or 2, comprising means for varying the wavelength of output from the transmitters.

4. Apparatus according to any of Claims 1 to 3, comprising memory means for storing a pattern of variation over time of output from transmitters of the apparatus.

5. Apparatus according to any of Claims 1 to 4, wherein the transmitters are transducers for converting electrical signals from the control means into sound.

6. Apparatus according to any of Claims 1 to 5, comprising at least 10

transmitters.

7. Apparatus according to any of Claims 1 to 5, comprising at least 30 transmitters.

8. Apparatus according to any of Claims 1 to 7, wherein the support structure is composed of or comprises a circuit board, such as a printed circuit board.

9. Apparatus according to any of Claims 1 to 8, wherein the support structure is flexible and the apparatus may be deformed into a desired shape or orientation.

10. Apparatus according to any of Claims 1 to 9, comprising electrical connections so that two or more such apparatus can be connected together in a chain of apparatus, optionally with connection of further power supplies.

11. Apparatus for providing a lighting effect, comprising a plurality of light sources in close proximity to each other and a diffuser for diffusing the light from the plurality of light sources so that the diffused light is perceived to emanate not from a plurality of light sources but from a single, substantially continuous source.

12. Apparatus according to Claim 11 for providing a coloured lighting effect, comprising:-

a first source of light of a first colour;

a second source of light of a second colour, different from the first colour; and

a diffuser for diffusing the light from the first and second sources so that the diffused light from the diffuser is perceived to have different colour, shade or hue.

13. Apparatus according to Claim 12, comprising at least red, green and blue light sources and also, optionally, white light sources.

14. Apparatus according to any of Claims 11 to 13, comprising a linear array of light sources, such as a repeating, linear arrangement of light sources.

15. Apparatus according to any of Claims 11 to 14, further comprising an elongate diffuser along the length of the apparatus.

16. Apparatus according to Claim 15, wherein the light sources and diffuser are deformably mounted together so that they can be configured into a required display shape, and optionally including deformable support structure.

17. Apparatus according to any of Claims 11 to 16, wherein the distal and proximal ends of the apparatus comprise electrical connections, so that a plurality of apparatus can be connected together in a chain.

18. Apparatus according to Claim 17, comprising electrical connections for connection of the apparatus to a power supply and/or to control electronics, whereby in a chain of a plurality of apparatus, each or a number of the apparatus can be separately connected to a power supply or power supplies.

19. Apparatus according to any of Claims 11 to 18 wherein the light sources have variable intensities.

20. Apparatus according to any of Claims 11 to 19, including means for selectively controlling one or more light sources so as to create a static or moving coloured lighting effect.

21. Apparatus according to any of Claims 11 to 20, comprising means for connection to circuitry for control of illumination of the light sources, such as RS232 computer interface.

22. Apparatus according to any of Claims 11 to 21 wherein the light sources are light emitting diodes (LEDs).

23. A method of providing a linear output of electromagnetic and/or sound waves, comprising:-

mounting a plurality of transmitters in a linear array; and

controlling the output of each transmitter individually.

24. A method according to Claim 23, comprising mounting at least 10, preferably 30 transmitters in a linear array.

25. A method according to Claim 23 or 24 comprising varying the intensity of output of the transmitters.

26. A method according to any of Claims 23 to 25 comprising varying the frequency of output of the transmitters.

27. A method of providing a lighting effect, comprising:-

mounting on one side of a diffuser, a linear array of light sources of the same colour;

outputting light from a plurality of said sources simultaneously and via the diffuser;

wherein the light sources are so arranged that light from the sources is diffused by the diffuser and perceived by a viewer as emanating from a substantially continuous light source rather than from a plurality of individual light sources.

28. A method of providing a coloured lighting effect, comprising:-

mounting on one side of a diffuser, a linear array of light sources comprising a first source of light of a first colour, and a second source of light of a second colour which is different from the first;

outputting light from both sources simultaneously and via the diffuser;

wherein the light sources are arranged so that light from the sources is diffused by the diffuser and perceived by a human eye as containing or consisting of light of a different colour, shade or hue.

29. A method according to Claim 28, comprising use of red, green and blue light sources, and optionally white light sources.

30. A method according to Claim 28 or 29, further comprising mounting on the one side of the diffuser a third light source for outputting light of a third colour different from the first and second colours, wherein the light sources are arranged so that when any two of the light sources are operating, light from the sources is diffused by the diffuser and perceived by a human eye as containing or consisting of light of a different colour, shade or hue.

31. A method according to any of Claims 27 to 30, comprising mounting the light sources in a linear arrangement along the length of an elongate diffuser, and outputting light along the length of the diffuser, and optionally substantially surrounding the light sources by diffusing or non-translucent material, so that substantially no light is output from the apparatus other than via the diffuser.

32. A method according to any of Claims 27 to 31, comprising independently controlling illumination of each individual light source.

33. A method according to any of Claims 27 to 32, wherein the light sources are LEDs.

34. A method of making a lighting display, comprising mounting, on deformable support material, a diffuser and a plurality of (a) like coloured or (b) differently coloured light sources, wherein light from the sources is diffused by the diffuser and perceived (a) as emanating from a substantially continuous source or (b) as being of different colour, shade or hue.

35. A method according to Claim 34, wherein each of the light sources is independently controlled.

36. A method according to Claim 34 or 35, comprising mounting light sources of at least three different colours on deformable support material.

37. A method according to Claim 36, wherein the light sources comprise sources of red, green and blue light and optionally sources of white light.

38. A method according to any of Claims 34 to 37, wherein the support material and diffuser, once deformed into a desired shape, hold that shape without support.

39. Use of a linear array of light sources or sound sources or both light and sound sources to provide indication or instruction of direction or speed.